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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,564	06/02/2000	Alberto Profumo	3286-0103P	7632

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Birch Stewart Kolasch & Birch LLP  
P.O.Box 747  
Falls Church, VA 22040-0747

EXAMINER
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FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/586,564

Applicant(s)

PROFUMO ET AL.

Examiner

Derrick W. Ferris

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. **Claims 1-12** are narrative in form and do not contain positively recited steps of specific process. Note that method claims should set forth a series of steps in the active tense in an instruction-like manner thereby reciting an actual method. Dependent claims should further limit base claims by reciting additional steps in a likewise fashion. Ex parte Erlich 3 USPQ2d 1011 at 1017 [6].

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-17** are rejected as failing to define the invention in the manner required by 35 U.S. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device.

### *Specification*

4. The abstract of the disclosure is objected to because the length is in excess of 150 words. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 5-13, and 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,324,184 to *Hou et al.* (cited on Search Report as WO 97/35410).

As to **claim 1**, *Hou et al.* discloses both a dynamic and static method for allocating time slots in an ATM system [column 4, lines 21-41]. Shown in figures 2 and 5 are a master station MS (i.e., central controller 210) and peripheral stations PS (i.e., subscriber units 205,252,254). In particular, a portion of the bandwidth is assigned to static connections and the remainder is distributed according to dynamic bandwidth allocation DBA techniques [column 7, lines 26-36; column 8, lines 1-14; figure 4]. Specifically, *Hou et al.* teaches “guaranteed dynamic bandwidth” using  $R_{min}$  [e.g., column 7, lines 54-67; column 8, lines –14; column 8, lines 39-56].

Examiner notes that it may not be clear from *Hou et al.* on “available dynamic bandwidth” which is shared using equal parts among all the peripheral stations. Examiner notes that it would have been obvious to someone skilled in the art prior to applicant’s invention to share the bandwidth equally among all peripheral stations. One motivation would be to assign the same level quality of service between all stations (i.e., allow each station equal access). As support, *Hou et al.* discloses that bandwidth is allocated (i.e., adjusted) for each user in each channel in successive control intervals [column 9, lines 7-22; figure 4; column 10, lines 42-61].

As to **claim 5**, see column 7, lines 27-37.

As to **claim 6**, examiner notes a reasonable but broad interpretation of “means to choose the queue” with respect to QoS and counters (see reasoning behind rejection for claim 5).

As to **claim 7**, see figure 4.

As to **claim 8**, see rejection for claim 5.

As to **claim 9**, see column 11, lines 46-47.

As to **claim 10**, see the rejection for claim 1.

As to **claim 11**, see column 6, lines 14-42.

As to **claim 12**, examiner notes that it would have been obvious to someone skilled in the art prior to applicant’s invention to reinsert retransmitted cells in the correct order given the teachings at column 6, lines 14-42.

As to **claim 13**, see the rejection for claim 1.

As to **claims 15-17**, see column 2, lines 8-35 where examiner notes a reasonable but broad interpretation of queue status.

7. **Claims 1 -17** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,978,374 to *Ghaibeh et al.* (“*Ghaibeh*”).

As to **claim 1**, *Ghaibeh* discloses a point-to-multipoint network where figure 1 shows at least one head-end 22 (i.e., master station) and a plurality of network units (i.e., peripheral stations). In particular, *Ghaibeh* discloses a system and method for assigning/allocating bandwidth on the transmission channel from the network units 26 to the head-end 22 where bandwidth is assigned using “permits” (i.e., grants) in the downstream using a one byte MAC header (i.e., MAC protocol) and requested using

“requests” in the upstream [see figure 6]. In addition, *Ghaibeh* teaches a reasonable but broad interpretation of both static and dynamic allocation techniques including CBR, VBR, and ABR (for a minimum guaranteed bandwidth). Thus both a “guaranteed dynamic bandwidth” and “available bandwidth technique” are taught by the reference [e.g., column 2, lines 50-67; column 5, lines 55-67].

Not clearly taught by the *Ghaibeh* reference is sharing equal parts among all peripheral stations that signal to the master station the need to use the channel from the peripheral stations to the master stations to send traffic. Examiner notes that it would have been obvious to someone skilled in the art prior to applicant’s invention to share equal parts among peripheral stations. One motivation would be to assign the same level quality of service between all stations (i.e., allow each station equal access). As support, *Ghaibeh* discloses that at least one ATM cell in a respective VBR, ABR, or CBR service type is given an equal allocation of the available upstream bandwidth for that respective service priority [column 11, lines 1-12]. Thus *Ghaibeh* provides a motivation for using equal parts among peripheral stations.

As to **claims 2-4**, see column 9 lines 57-67 through column 10, lines 1-46.

As to **claim 5**, see column 10, lines 21-35.

As to **claim 6-10**, see column 6, lines 60-67 through column 7, lines 1-13 and column 9 lines 57-67 through column 11, lines 1-55.

As to **claim 13**, see the rejection for claim 1.

As to **claim 14**, see the rejection for claim 2.

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8. **Claims 11 –12 and 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,978,374 to *Ghaibeh et al.* (“*Ghaibeh*”) in view of “Data Link Control Protocols for Wireless ATM Access Channels” to *Narasimhan et al.* (“*Narasimhan*”).

As to **claims 11-12**, *Ghaibeh* is silent or deficient to retransmission of cells that contain errors (i.e., a data link layer). Examiner notes that retransmission of cells through acknowledgment messages are well known in the art prior to applicant’s invention. As support, *Narasimhan* discloses transmitting an acknowledgment and corresponding packets thus providing a motivation for a retransmission mechanism [page 755].

As both reference discloses telecommunications in general, and more particularly, ATM packets based on a dynamic TDMA framework, examiner notes a motivation to combine the subject matter as a whole for both references. In other words, one would be motivated to modify the teachings of *Ghaibeh* to provide similar error correction since both inventions add a MAC layer to ATM.

As to **claim 15-17**, see column 6, lines 60-67 through column 7, lines 1-13 and column 9 lines 57-67 through column 11, lines 1-55 of *Ghaibeh*.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.


If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-3900.

Derrick W. Ferris  
Examiner  
Art Unit 2663

*DWF*  
DWF

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 7/5/03